



AGRICULTURAL SOCIETY OF NIGERIA (ASN)

53RD ANNUAL CONFERENCE PROCEEDING

53rd

Annual Conference PROCEEDINGS

Theme

**Building a Resilient and Sustainable
Economy Through Innovative
Agriculture in Nigeria**



BADEGGI 2019

"Building a Resilient and Sustainable Economy through Innovative Agriculture in Nigeria" 53th Annual Conference of Agricultural Society of Nigeria. 21st -25th October, 2019. NCRI, Badeggi, Nigeria



AGRICULTURAL SOCIETY OF NIGERIA (ASN)

Theme

**Building a Resilient and Sustainable
Economy Through Innovative
Agriculture in Nigeria**



Annual Conference PROCEEDINGS

**21st - 25th October, 2019
NCRI Badeggi**

EDITORS

**Isong, A Onwaghala, J. T.
Eze, J. N. Gbadeyan, S. T,
Umar, F. A. Abubakar, H. N.
Ismaila, A. Basse M. S.
Kolade, M. O. Uyokeyi, U.
Bello, O. L.**

BADEGGI 2019

**“BUILDING A RESILIENT AND SUSTAINABLE ECONOMY THROUGH
INNOVATIVE AGRICULTURE IN NIGERIA”**

**PROCEEDINGS OF THE 53RD ANNUAL CONFERENCE OF THE
AGRICULTURAL SOCIETY OF NIGERIA (ASN), HELD AT THE NATIONAL
CEREALS RESEARCH INSTITUTE, BADEGGI, NIGERIA, 21-25 OCTOBER,
2019**

© Agricultural Society of Nigeria

ISBN: 0300.368X

Publishers of the Nigerian Agricultural Journal

Published in 2019

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the prior permission of the Society except for the purpose of private study, research criticism or review.

Correct Citation

Isong, A., Onwhughalu, J. T., Eze, J. T., Gbadeyan, S. T., Umar, F. A., Abubakar, H. N., Ismaila, A., Bassey, M. S., Kolade, M. O., Uyokei, U., Bello, O. L. (2019). (eds) Building a Resilient and Sustainable Economy through Innovative Agriculture in Nigeria. Proceedings of the 52nd Annual Conference of the Agricultural Society of Nigeria held at the National Cereals Research Institute, Badeggi, Nigeria. 21st – 25th October, 2019

AGRICULTURAL SOCIETY OF NIGERIA
2019 ANNUAL CONFERENCE

NATIONAL EXECUTIVE COUNCIL (NEC) MEMBERS

Dr. M. N. Ishaq	President
Prof. Jude A. Mbanasor	1 st Vice President
Dr. Solomon O. Afuape	2 nd Vice President
Dr. Aderemi G. Adesoji	General Secretary
Dr. Mrs. C. Aniedu	1 st Assistant Secretary
Dr. J. E. Ewuziem	2 nd Assistant Secretary
Dr. Ahmed A. Njidda	Treasure
Dr. Mrs. Helen N. Anyaegbunam	Assistant Treasurer
Dr. B. C. Okoye	Editor in-Chief
Dr. A. I. Sharifai	Business Manager
Dr. Adeyemi O. Olojede	Immediate Past President
Prof. Chryss F. I. Onwuka	Council Member
Prof. Nasiru D. Ibrahim	Council Member
Prof. S. I. Omeje	Council Member
Yarama D. Ndirpaya	Council Member

AGRICULTURAL SOCIETY OF NIGERIA
2019 ANNUAL CONFERENCE

PAST PRESIDENTS

Professor A. Oyenuga	(1962 – 1964)
Chief T.S.B. Aribisala	(1964 – 1967)
Chief B.S. Oloruntola	(1967 – 1969)
Professor L.K. Okpeke	(1969 – 1970)
Chief E.C. Ogor	(1970 – 1972)
Chief Ndaeyo	(1972 – 1973)
Chief C.O. Oranyeli	(1973 – 1977)
Dr. B.E. Onochei	(1977 – 1979)
Professor I.B. Olugbemi	(1979 – 1984)
Professor B.N. Okigbo	(1984 – 1988)
Dr. L.S.O. Ene	(1988 – 1993)
Sir Tunji Akinyi	(1993 – 1998)
Dr. L.C. Igbokwe	(1998 – 2002)
Dr. E.D. Imolehin	(2002 – 2006)
Dr. C.O. Okonkwo	(2006 – 2010)
Professor I.U. Abubakar	(2010 – 2014)
Dr. Adeyemi O. Olojede	(2014 – 2018)

AGRICULTURAL SOCIETY OF NIGERIA
2019 ANNUAL CONFERENCE

FELLOWS OF THE ASN

1. PROF. B. N. OKIGBO, *FASN*
2. SIR TUNJI AKINIYI, *OFR, FASN*
3. DR. SAM EGWU, *FASN*
4. DR. OLAEKAN ARE, *FASN*
5. DR. AA. C. IGBOKWE, *FASN*
6. PROF JULIUS OKOJIE, *FASN*
7. DR. K. I. NWOSU, *FASN*
8. PROF. A. R ONWUALU, *FASN*
9. DR. SALISU A. INGAWA, *FASN*
10. PROF. O. O. BALOGUN, *FASN*
11. OBA ADEBIYI ADEGBOYE ADESIDA, *FASN*
12. SIR KANMI SOBOWALE, *FASN*
13. PROF B. Y. ABUBAKAR, *FASN*
14. PROF. B. TANIMU, *FASN*
15. PROF. ANGO ABDULLAHI, *OFR, FASN*
16. ALM. BUKAR TIJJANI, *FASN*
17. DR. SHETTIMA MUSTAFA, *OFR, CON, FASN*
18. ALH. MUHAMMADU LIMAN, *OFR, CON, FASN*
19. DR. I. C. OKONKWO, *FASN*
20. PROF S. G. ADO, *FASN*
21. PROF B. ESONU, *FASN*
22. DR. ADESINA AKINWUMI, *FASN*
23. AMB. DR. B. K. KAIGAMA, *FASN*
24. PROF. VINCENT ADEDIBA, *FASN*
25. PROF. I. U. ABUBAKAR, *FASN*
26. PROF. S. I. OMEJE, *FASN*
27. PROF VINCENT IMOH, *FASN*
28. PROF. C. F. I. ONWUKA, *FASN*
29. PROF. A. M. FALAKI, *FASN*
30. PROF. M. AKORODA, *FASN*
31. PROF. A. C. NWOSU, *FASN*
32. PROF. IVARA ESU
33. PROF. BASSEY I. OKON
34. DR. ADEYEMI OLOJEDE
35. DR. ANTHONY OKEKE
36. PROF. GBOYE TOGUN
37. DR. NTERANYA SAGINGA
38. PROF. EZRA BAKO ADAMU
39. PROF. C.E. NWAJIUBA

40. MR. BOLA ASHAYE
41. DR. EMELIKE OKORO
42. PROF. SANI MIRO
43. PROF. A.O. OGUNBILE
44. PRF. M.D. MAGAJI
45. PROF. MRS. STELLA WILLIAM
46. DR. E.D IMOLEHIN

AGRICULTURAL SOCIETY OF NIGERIA
2019 ANNUAL CONFERENCE

REVIEWERS

Isong, A
Eze J. N.
Onwaghalu, J. T.
Bakare, S. O.
Tihamiyu, S. A.
Nureni,
Onyekazi, H
Shokalu, O
Habib, H.N
Salihu, B. Z.
Gbadeyan, S. T
Kolade, M. O.
Umar, F. A
Apuyor, B.

AGRICULTURAL SOCIETY OF NIGERIA

2019 ANNUAL CONFERENCE

LOCAL ORGANIZING COMMITTEE (LOC)

Dr. P. A. Ibrahim	Chairman LOC
Dr. J. N. Eze	Secretary LOC
Dr. Isong Abasianyanga	Technical Sub-Committee Chairman
Mr. Benard Ehirim	Fund raising Sub-Committee Chairman
Miss Ugalahi Uduma	Welfare Sub-Committee Chairperson
Dr. Salihu Zuluqurineen	Publicity Sub-Committee Chairman
Mr Jacob Jiya Yisa	Protocol Sub-Committee Chairman
Dr. Aliyu Umar	Member LOC
Dr. M. N. Ishaq	Member LOC
Dr. John Onwuaghalu	Member LOC
Mrs Hadiza Abba	Member LOC
Mrs Maryam Kabarani	Member LOC
Mr. Lukman Abdullahi	Member LOC
Mr. Victor Ekanem	Member LOC
Mrs Chika Nwokwelu	Member LOC
Mrs Fatima A. Umar	Member LOC
Mr. Tunde Olaniyan	Member LOC
Mr. Tokunbo S. Gbadeyan	Member LOC
Mr. Samuel Basse	Member LOC
Miss Joy Ekaette	Member LOC
Mr. Uba Uyokei	Member LOC
Mr. Moh'd Iya Umaru	Member LOC
Mr. Habib N. Abubakar	Member LOC
Mr. Kester C. Onyia	Member LOC
Mr. Ndanusa Abdulazeez	Member LOC
Mr. Baba A. Abdulmalik	Member LOC
Mr. Lukman Bello	Member LOC
Mr. Simon Tsado	Member LOC
Mr. Michael Yisa	Member LOC
Mr. Hafiz Hassan S.	Member LOC
Mrs Blessing O. Enape	Member LOC
Miss Moyosore O. Kolade	Member LOC
Mr. Benjamin Ocheni	Member LOC
Mr. Ismaila Abubakar	Member LOC

AGRICULTURAL ENGINEERING, PROCESSING AND VALUE ADDITION

	Aerial Technology for Precision Agriculture: Panacea for Agrochemical Spray in Nigeria M. B. Abubakar, U. Aliyu, I. N. Kolo, H. A. Onyenkazi, H. N. Abubakar, J. N. Eze, A. O. Fabiyi, R. O. Sanusi	1-5
AEPVA 01		
AEPVA 02	Design, Fabrication and Testing of a Groundnut Stripping Machine A.Gbabo, I. M. Gana, S. Oyebamiji, I. Mujahed, S. Nwabuisi	6-12
	Determination and control of pH and ammonia levels in concrete tank used for rearing of black tiger shrimp (<i>penaeus monodon</i>) M.A. Matanmi, P.E. Anyanwu, A.O Ayinla, B.I Ebonwu, I.K Ayaobu-Cookey, M.B. Hamzat, F.A. Ihimekpen, ES. Afolabi, MR.Ajijo, and P.C Ekprikpo, F. Aliyu, RL. Unah.	13-17
AEPVA 03		
AEPVA 04	Determination of Aflatoxin B1 content of Maize, Millet and Sorghum collected from Bida and Lavun Local Government Areas of Niger State, Nigeria M. S. Salahu, T. A. Gbodi, U.H. Kutigi, A. Oluwagbenga	18-20
	Development of a Manual Weeder M. Abubakar, M. O. Kolade, M. Yahaya, F. A. Audu, M. Moses, N. Baba, L. Abdullahi, E. E. Odey, S. Ethan, P.N. Ndakogi, A.S. Abubakar, A. and U. Aliyu	21-25
AEPVA 05		
AEPVA 06	Effects of some processing methods on Chemical properties of Groundnut (<i>Arachis hypogea</i>) Oil Extract Fatima Abdulkadir, C. M. Yakubu, I. K. Salamatu and M. M. Maude	26-29
	Effects of Processing Methods on Proximate Composition of Flour Obtained from Two Cassava Varieties C. B. Isirima, P. Okole I. Abali and U. Ogunu	30-34
AEPVA 07		
AEPVA 08	Effects of Different Processing Methods on the pH, Cooking time and Nutrient Composition of Fermented Castor Seeds (“Ogiri”) M. I. Umar, Y. e. Alkali, B. O. Apuyor, M. Alhassan and A. N. Aliyu	35-37
	Evaluation of Technical and cost efficiencies of high value cassava processing in Abia State Nigeria I.A. Onyegbulam¹, B. O. Ibeagwa² and O. E. Okwara	38-48
AEPVA 09		
AEPVA 10	Influence of tenderizer type, concentration and application method on chemical properties of <i>banda</i> (Nigerian dried meat product) R. L. Ibrahim and T. Ahmed	49-53
	Modification and Performance Assessment of a Castor Shelling Machine M. Mazza, B. Ndagi, L. Abdullai, E.E.Odey, M Abubakar, M.O. Kolade, M. Yahaya and F.A.Audu, P.N. Ndakogi, A.S. Abubakar, S. Ethan and A.Umar	54-57
AEPVA 11		
AEPVA 12	Nutritional Contents of Two Leafy Indigenous Vegetables Consumed in South western Nigeria H. O. Rosulu and A. S. Toku	58-60

	Physical properties of dried meat product (<i>banda</i>) as influence by tenderizer type, concentration and application method	
AEPVA 13	H. G. Isah and R. L. Ibrahim	61-64
	Proximate Analysis of Chicken Weed (<i>Portulaca quadrifida</i> L.) as Influenced by Soil Textural Class in Sokoto, Nigeria	
AEPVA 14	Y. Garba, A. I. Yakubu, H. A. Gwandu and S. S. Noma	65-67
	Proximate, Mineral and Phytochemical content analysis of <i>Sida acuta</i> (Burm) F in Nekede Owerri, Imo State.	
AEPVA 15	C.O. Anah, O.M. Amasiatu, E.U. Eze, P.C, Abana, G.U. Njoku, G.O. Ibeh	68-74
	Quantitative and Correlation of the Bioactive Phytochemicals in Fruits of Date Palm (<i>Phoenix dactylifera</i> L) Accessions in Nigeria	
AEPVA 16	S. A. Yahaya, O. A Falusi, A. S Gana, O. A.Y Daudu, M. L. Muhammad, A. A Gado, I. M. Koloche, A. Abubakar², B. M. Abdulkarim	75-79
	Rice Processing as a Means of Poverty Reduction among Nigerian Women	
AEPVA 17	O. C. Nwahia and O. S. Balogun	80-86
	Sweetpotato Value Addition in Nigeria: A Review	
AEPVA 18	M.E Ejechi, and J. C. Udemezue	87-89
	The Role of Cereals in Maintaining Food Security	
AEPVA 19	O. M. Agbogidi, P. G. Eruotor and P. Iroba	90-91

AGRICULTURAL SOCIO-ECONOMICS AND EXTENSION

	A Stochastic Frontier Approach of the Technical Efficiency of Small-Scale Cassava Farmers in Ondo North ADP, Ondo State, Nigeria	1-7
AEE 01	I. A Adedeji¹, A. O. Yusuf, A. A. Adeyemo, S. M. Umar¹ and M. J. Madaki	
	A Study on Production Instability and Production behaviour of Rice in Nigeria	8-17
AEE 02	S. M. Umar, M. S. Sadiq, I. A. Adedeji, M. J. Madaki and A. Iliyasu	
	Adaptation Strategies to Climate Change and Variability by Farming Household in Agricultural Zone 1, Niger State, Nigeria	18-22
AEE 03	E. Shaba, Ajayi, O. J., and Mohammed, I.	
	Adoption of Diffuse Light store for Seed Potato storage in Jos South LGA of Plateau State, Nigeria	23-27
AEE 04	C. O. Amadi, D. M. Lenka, and T. Y. Dalyop	
	Adoption of Improved Okra Production Technologies by Farmers in Ivo Local Government Area of Ebonyi State, Nigeria	28-31
AEE 05	S. I. Ume, and M. O. Okoronkwo	
	Adoption Rate of Quality Protein Maize (Qpm) in Ido Local Government Area of Oyo State	32-36
AEE 06	A.S. Adebayo and M. S. Adedeji	
	An analysis of Gender in relation to access to credit facilities among poultry farmers in Edo State, Nigeria	37-40
AEE 07	G. F. Okwuokenye, G. F. and D.U. Okoedo-Okojie	
	Analysis of Agricultural Programmes Broadcast on various Radio and Television stations in Rivers State	41-43
AEE 08	A.I. Emodi, C. O. Elenwa, H. O. Irinyemi and I. Philip	

ASEE 09	Analysis of Cassava Production Trend in Nigeria (1961-2014) A.Garba, J. N. Salihu, Nmadu, F.D., Ibrahim and C.O., Adebayo	44-47
ASEE 10	Analysis of Constraints to Coconut Marketing in Badagry and Ojo Local Government Areas of Lagos State, Nigeria B.O. Erumwenbibi, G.O. Alufohai, B. Adakaren and R.A. Abu	48-50
ASEE 11	Analysis of Growth Trend of Foreign Direct Investment inflow into the Agricultural Sector in Nigeria A. S. Uteh, E. S. Yisa, M. A. Ojo and F. D. Ibrahim	51-53
ASEE 12	Analysis of Sachet Table Water Production using Economic Order Quantity Model in Gombe State, Nigeria K. Hamidu, I. Mohammed, H. A. Danwanka, A. A. Bose, A. Kolo, R. Mohammed, and A. Saleh	54-58
ASEE 13	Analysis of the Determinants of Poverty Status of Rural Households in the Northern Zone of Adamawa State, Nigeria A.K. Adewuyi, M. Joseph and I. A. Lumbonyi	59-62
ASEE 14	Analysis of the determinants of quantity of garri sold by major actors in the cassava value chain F. C. Okoronkwo, J. B. Simonyan and J. C. Efedua	63-68
ASEE 15	Analysis of the patterns of income diversification among farming household in chikun and zangokataf local government areas of kaduna state, nigeria. E.A. Sheyin, B. Yahaya, L. M. Abeku¹, D.B. Abiyong and B.E. Moses	69-73
ASEE 16	Assessment of Community Awareness on Arable Crop Production Technologies in Ikwerre Local Government Area of Rivers State C. O. Elenwa, A. I. Emodi, P. I. Okike	74-78
ASEE 17	Assessment of Crop Farmers' and Pastoralists' Perceptions on the Establishment of Cattle Ranches in Niger State, Nigeria I. M. Mayaki, H. T. Jacob, I. S. Umar and A. Abdullahi	79-83
ASEE 18	Assessment of Efficient Utilization of Production Inputs among Women Rice Farmers in Niger State, Nigeria A.Yusuf, J. H. Tsado, I. T. Salihu and A. Abdullahi	84-89
ASEE 19	Assessment of farmers' level of participation in melon value chain in Kwara State, Nigeria C.O. Adebayo; A. Ogaji and F.Umar	90-93
ASEE 20	Assessment of Farm-Level Data on Cassava Production, Productivity and Returns among IFAD-VCDP Beneficiaries in Niger State, Nigeria F. Yisa and A. Adewumi	94-97
ASEE 21	Assessment of Households' Consumption of Orange Fleshed Sweetpotato in Anambra State, Nigeria I. N. Nwokocha, H.N. Anyaegbunam, C. J. Eluagu and M. H. Tokula	98-101
ASEE 22	Assessment of Inputs and Output level in Ruminant Production among Participating and non-Participating Farmers of Fadama II Project in Kaduna A.Abubakar., M. O. Ayorinde, D. M. Wambai	102-106
ASEE 23	Assessment of Involvement in Cassava Processing among Women Beneficiaries of ATASP-1 in Gwaram Local Government Area of Jigawa State, Nigeria	107-111

A. G., Adam, M. I., Hudu and M. U. Makeri

ASEE 24	Assessment of level of Awareness and Interest in Diffuse Light Storage for Seed Potato by farmers in Jos South LGA of Plateau State Nigeria G. Amadi	112-116
ASEE 25	Assessment of Livelihood status of Project Participating Irish Potato (<i>solanum tuberosum l.</i>) Farmers in Plateau State M. I., Hudu, S., Ladan and A. G., Adam	117-120
ASEE 26	Comparative Analysis of Productivity and Poverty Status among Users and Non Users of Improved Sorghum Varieties in Kano State, Nigeria T. A. Olatoye, F. D. Ibrahim and A. O. Ojo	121-124
ASEE 27	Constraints to Investment among Orange-fleshed Sweetpotato Root Entrepreneurs in North Central, Nigeria J.T. Nyor, J.A. Mbanasor, and B. C. Gaga	125-128
ASEE 28	Constraints to Yam Value Chain Development in Nigeria H. N. Anyaegbunam, I. N. Nwokocha, J. O. Nwaekpe and J. C. Eluagu	129-131
ASEE 29	Consumers' Preference and Perception for Locally Processed Meat in Akko Local Government, Gombe State, Nigeria J. A. Nandi, E. F. Panwal, U. K. Iroegbute and A. Sani	132-136
ASEE 30	Contributions of NRCRI Umudike to the Socioeconomic Development of Selected Communities in Nigeria Mazza Mary-Ann	137-140
ASEE 31	Cost and Return Analysis of Smallholder Cocoa Beans Producers in Ogun State, Nigeria M. E. Ahmad, and A. O. Agbaje	141-147
ASEE 32	Demand Preference of Consumers as a Catalyst for Local Rice Supply in Niger State S. N. Dauda, A. A. A. Coker, B. A. Ocheni, D. Opaluwa C. Ocheni B. Yunusa Jibrin, A. B. Hadiza, A. Umar, B. Usman, and O. Lukman Bello	148-154
ASEE 33	Demographic Characteristics of Smallholder Dairy Farmers in Sabon Gari and Giwa LGAs of Kaduna State L.A. Jinadu, A. Mohammed, T. A. Ibrahim, I. Mallam, R. O. Alao, O. A. Ibrahim, C. M Umego	155-159
ASEE 34	Determinants of Adoption of Pro Vitamin A Cassava Varieties by Farmers in Anambra State, Nigeria P. E. Amadi, C. S. Onwusiribe., F. N. Nwakor and G. Amadi	160-164
ASEE 35	Determinants of Profit Efficiency among Smallholder Mini tuber Yam (<i>Dioscorea Rotundata</i>) Farmers in Southeastern Nigeria V.O. Onyenobi, M. C Okwusi, M. Mazza, and J. E. Ewuziem	165-169
ASEE 36	Determining Nutritional Status of the Rice Farmers Participating in IFAD-VCD Programme in Niger State of Nigeria M. S. Sadiq, I. P. Singh, M. M. Ahmad, B. I. Usman and J. B. Yunusa	170-176
ASEE 37	Determining the Socioeconomic Characteristics of Ginger Processors in South Eastern Nigeria C Kadurumba and F N Nwakor	177-180
ASEE 38	Economic Analysis of Fish Demand among Urban Households in Taraba State, Nigeria	181-185

C. Barnabas, E. S. Yisa and C. O. Adebayo

	Economic Analysis of Spinach (<i>Amaranthus</i>) Production in Fagge Local Government Area of Kano State, Nigeria.	186-189
ASEE 39	H. Mohammed, S. A. Safiyanu, Z. Y. Abdullahi, I. Suleiman, A S Aliy Dahiru and L. A Ereně	
ASEE 40	Economics of Fish Production in Ebonyi State, Nigeria C. Kadurumba, and J. U. Mgbada	190-193
ASEE 41	Economics of Seed Yam Production in an Aeroponics System: Implication for Sustainable Yam Production in Nigeria C. A. Kalu, O. D. Onyegbula, O. N. Eke-Okoro, N. G. Maroya and A. A. Beatrice	194-198
ASEE 42	Economics of Shea Nut Processing In Kwara And Niger States A. G. Charis, K. M. Baba, M. A. Ndanitsa	199-202
ASEE 43	Effects of Agricultural Credit on Poverty status Of farming Household in Ikwuano Local Government Area of Abia State, Nigeria. U. R. Oke, F. A. Nse-Nelson and C. P. Nwanne	203-208
ASEE 44	Effects of Climate Smart Agricultural Practices (csaps) on Food Security of Farming Households in Kwara State, Nigeria O. A. Adebisi, L. O. Adebisi, A. Jonathan, T.O. Daodu, A. A. Opakunle and F.Ibrahim	209-214
ASEE 45	Effects of Enterprise Diversification on the incomes of small-scale maize farmers in Oyo State, Nigeria A. A. A. Coker and K. B. Aworinde	215-217
ASEE 46	Effects of Fadama III Projects on Cassava Processing in Ohaozara Local Government Area of Ebonyi State Nigeria V.C. Emehute, C I Emehute and M.O Okoronkwo	218-221
ASEE 47	Effects of International Fund for Agricultural Development-Value Chain Development Programme on Small-scale Rice Farmers' income in Niger State of Nigeria M. E. Shehu, M. S. Sadiq, I. M. Muhammad, M.A. Ndanitsa, A.O Ojo and U. K. Abubakar	222-227
ASEE 48	Effects of Post-Harvest Losses on the Income of Root and Tuber Crop Farmers in Ikwuano Local Government Area of Abia State, Nigeria R. N. Echebiri and Onu, D. O.	228-233
ASEE 49	Effects of Saving Mobilization on Enterprise Development among Rural Women of Niger State, Nigeria E.N. Yisa, J. H Tsado,, I. T. Salihu	234-239
ASEE 50	Effects of Socio-Economic Factors on the Adoption of Improved Maize Variety in Kashere, Akko LGA of Gombe State, Nigeria J. N. Akeweta, L. A. Tata, F. David and S.T. Tarki	240-244
ASEE 51	Empirical Compound Growth Rate Analysis of Rice Production, Imports and Consumption in Nigeria (1970 – 2016) D. O. Onu, and R. N. Echebiri	245-251
ASEE 52	Empirical Study of Farmers' Adoption of Cocoyam Production Technologies in Abia State, Nigeria Eluagu Chinwendu Juliet, Nwokocha Ivy Nwamaka, Ejechi Mercy and Okoye Benjamin	252-256

	Evaluation of Food Security and Poverty status of Cereal crop farmers under FADAMA III + AF in Niger State, Nigeria.	257-260
ASEE 53	S. T. Tsavhemba, O. J. Ajayi, M. Ibrahim	
	Evaluation of the Impact of Extension Agents in Development of Agriculture in Owerri West Local Government Area of Imo State.	261-265
ASEE 54	E. U Eze, C. O Anah, C. T Opara, G. U Njoku	
	Export Potentials of Nigerian Live Ornamental Fish: An Economic Analysis	266-273
ASEE 55	O.Y. AMBALI, O. E. AYINDE and N.B. Nofiu	
	Extent of Rural Women's Involvement in Cassava Processing Enterprise of the National Special Program on Food Security in Enugu State, Nigeria	274-277
ASEE 56	M. Mazza, R. U. Kanu and D. S. Oaya	
	Factors Affecting Sweetpotato Production among Rural Women in Ebonyi LGA, Ebonyi State, Nigeria	278-281
ASEE 57	F. N. Nwakor, M. Ben Chukwu, P. O. Amadi, and R. I. Kanu	
	Factors Affecting the Adaption, Adoption and Utilization of Biochar and Agricultural Technologies by Farmers in Nigeria: A Review	282-287
ASEE 58	Ifejimalu Augustine Chukwuemeka	
	Gender Differentials in Livelihood Diversification strategies and its Effect on Poverty status of RURAL households in Niger State, Nigeria	288-291
ASEE 59	H. Iliyasu, S. I. Tyabo, I. Mohammed	
	Identifying the Potentials of Sweet Potatoes for Food Security in Nigeria	292
ASEE 60	Q. C. Uwandu, P. E. Amadi, N. Ogbonna and G. Amadi	296
	Impact Assessment of Better Life for Rural Women Program in Lagos State, Nigeria.	297-303
ASEE 61	B. N. Korie, O. E. Okelola and C. I. Korie	
	Influence of Crop Failure on Farmers' Income Level and Technological Response in Osun State, Nigeria	304-308
ASEE 62	J. O. Oyetoro, O. S. Akintaro, J. O. Akintonde and A. O. Tiamiyu	
	Introducing Strategies for the Formation of Cooperative Groups in Neighboring Communities of Bayero University Kano, Nigeria	309-312
ASEE 63	U. Sani, R.H. Balarabe	
	Marketing Channels of Coconut in Badagry and Ojo Local Government Areas of Lagos State, Nigeria.	313-316
ASEE 64	B. O. Erumwenbibi, G. O. Alufohai, G.O. Otalor, E. I. Omofonmwan¹ and A. O. Oloyede	
	Perceived effects of Climate Change on Profit Efficiency among Small Scale Chilli Pepper Marketers in Benue State, Nigeria	317-320
ASEE 65	U. H. Ukpe, C. R. F. Djomo, S. Mohamadou and I. O. Adepoju	
	Perceived relevance of Farmer Field School Training (FFST) on cowpea production among small scale farmers in Kebbi State, Nigeria	321-326
ASEE 66	H. U. Muhammad, G. B. Adesiji, I. S. Tyabo, O. J. Ajayi and Y. Muhammed	
ASEE 67	Principal Component Analysis of Production Constraints of Smallholder Arable Crop Farmers in Kwara State, Nigeria	327-331

A. Adewumi, L. Tanko, F. D. Ibrahim and E. S. Yisa

	Problems Affecting Adoption of NCAM Cassava Processing Centers in Kwara State	332-336
ASEE 68	B.T. Mohammed, A.F. Abdulquadri and J. K. Omisore	
	Productivity Effects of Improved Rice Varieties Adoption on Yield of Farmers under IFAD – VCDP in Niger State	337-339
ASEE 69	S. Segun, K. M.Baba, M. A. Ndanitsa	
	Profitability Analysis of Marketing Yam in Two Seasons in Nasarawa State, Nigeria	340-347
ASEE 70	J O. Simpa and J O. Olukosi	
	Profitability and Resource Use Efficiency of Tomato Production in Wammako Local Government Area of Sokoto State, Nigeria.	348-351
ASEE 71	B.B. Abubakar¹ and A. Sani	
	Profitability of Pineapple Fruits marketing in Kano Metropolis, Nigeria	352-355
ASEE 72	A. A. Adomi, A.I. Tanimu, S. Umar, I. Suleiman and S.A. Safiyanu	
	Review Evaluation of analysis of Risk Attitudes and Management strategies of Poultry Farmers in Kogi State, Nigeria	356-359
ASEE 73	O. F. Suberu, C. O. Adebayo, U. S. Mohammed	
	Review on Effectiveness of the Alternative Dispute Resolution strategies in Improving Farmers-Pastoralists relationship in North Central, Nigeria	360-362
ASEE 74	M. I. Omaku, I. S. Umar, R. S. Olaleye, J. H. Tsado and J. J. Pelemo	
	Review on effects of Cooperative Societies On women Involvement in groundnut Processing in Bida and Mokwa local Government areas of Niger State, Nigeria	363-365
ASEE 75	R. Hussein, R. S. Olaleye, I. Mohammed, U. Mohammed, J. J. Pelemo	
	Review on Gender Differentials in Income Inequality, Poverty and Food Security among Crayfish Harvesting Households in the Niger Delta Region, Nigeria	366-369
ASEE 76	E. J. Etim, K. M. Baba, M. A. Ojo and M. A. Ndanitsa	
	Review on Mass Media utilization on improved Yam Production by Rural Farmers in North Central, Nigeria	370-372
ASEE 77	S. C. Opara, R. S. Olaleye, M. Ibrahim, I. T. Salihu, J. J. Pelemo and H. N. Abubakar	
	Review on the impact of insurgency on agricultural activities among rural women of Adamawa State, Nigeria	373-375
ASEE 78	J. G. Garnvwa, I. S. Umar, O. J. Ajayi and Y. Muhammed	
	Review on Involvement of small and medium scale enterprise in culture fish value chain in Niger State Nigeria.	376-379
ASEE 79	M. Omananyi, O.J., ²I.S Umar	
	Rural Farmers Credit Sufficiency from Informal Financial Self-help Groups: Implications for Agricultural Production in Delta State	380-385
ASEE 80	P. I. Nwandu	
	Socioeconomic Characterization of Cassava Farmers in Benue State, Nigeria	386-389
ASEE 81	M. H. Tokula and I.N. Nwokocho	
ASEE 82	Socio-economic Determinants of Adoption of Palm oil Processing	390-394

	Technology among Small holder Processors in Ovia North East and Ikpoba Okha LGAs, Edo State, Nigeria A.I. N. Kaine and Fantaya Joyce Bello	
ASEE 83	Socio-economic factors influencing the use of Organic Manure among Urban Vegetable Farmers in Ondo City, Ondo State, Nigeria P. T. Owombo, I. Ibidapo, J. O. Ijigbade	395-398
ASEE 84	Socio-Economic Status of Pineapple Marketers in Kano State, Nigeria A.T. Lawal, J. Umar, A. A. Adomi. S. A. Dambazau¹, D. A. Mshelia and I. Suleiman	399-404
ASEE 85	Socio-institutional factors influencing Orange Flesh Sweet Potato (OFSP) production in Offa Local Government Area of Kwara State, Nigeria Y. Muhammed, O. J. Ajayi, H. U. Muhammad, K. Arowolo and S. C. Opara	405-410
ASEE 86	Sustainable Housing Management through Strategic Landscape Planning in Nigeria F.B. Adesokan and J. M. Ajekigbe	411-414
ASEE 87	Sweet potato 'A Hidden Treasure' among Root and Tuber Crops in Nigeria J. C. Udemezue and M. E. Ejechi	415-419
ASEE 88	Technical Efficiency Differential in Rice Production in Pategi Local Government Area of Kwara State, Nigeria I. A. Adedeji, M. M. Maulu, B. H. Kwaji, K. A. Zaki and H. S. David	420-427
ASEE 89	The Role of Effective Land Utilization in Curbing the Crop-Farmers' Pastoralists Conflict in Nigeria J. S. Aluwong	428-432
ASEE 90	Typology of farmers in Safe Local Government Areas of the North Eastern States of Nigeria Hakeem A. Ajegbe, I. I. Angarawai, A. H. Inuwa, A. Kunihya, and F. M. Akinseye	433-436
ASEE 91	Utilization of Agricultural Technology Information on Social Media among Agricultural Researchers of Agricultural and Rural Management Training Institute, Ilorin Kwara State J. O. Oyetoro, S. I. Adetunbi and O. S. Akintaro	437-440
	Risk Attitudes Of Rice Farmers Participating In Ifad-Vcd Programme In Niger State Of Nigeria Sadiq, M.S., Singh, I.P., Ahmad, M.M., Usman, B.I. and Yunusa, J.B	439-

AGRO-CLIMATOLOGY, FORESTRY AND WILDLIFE MANAGEMENT

ACFWM 01	A Review of Sustainable Agroforestry Practices as Climate Change Adaption and Mitigation Strategy in Nigeria J. M. Ajekigbe and F. B. Adesokan	1-4
ACFWM 02	Adaptive strategies to ameliorate the effect of climate change on maize production in Osun State, Nigeria	5-11

E. Ayanwuyi, J.O Akintonde, A.O. Tiamiyu and S. Rahman

ACFWM 03	Agroforestry: A Mitigation Strategy for Climate Change in Nigeria M. O. O. Isese, T.O.A Adeyemi, E.S. Omoghie, and A.S Fadoyin	12-15
ACFWM 04	Analysis of Drought Occurrences and its Implication on Agriculture in Niger State, Nigeria J. N Eze, P. A Ibrahim, I. N. Kolo, U. Aliyu, A. Baba-Alhaji, O. M Ogar, M. Alfa and N. N. Ayanniyi	16-22
ACFWM 05	Anthropogenic Activities at Olokemeji Forest Reserve, Ogun State, Nigeria D. M. Taiwo, S. O. Olaotilaaro and O. R. Jeminiwa	23-25
ACFWM 06	Assessing Opportunities for Restoration – A Roadmap for Sustainable Climate Change Mitigation O. R. Olatidoye	26-30
ACFWM 07	Biodiversity Conservation and climatic dynamics in the face of economic and sustainable development Onilude, Quadri Ayansola	31-35
ACFWM 08	Climate Change Adaptation Strategies used by Food Crop Farmers in Oluyole Local Government, Oyo State A.S. Alli-Balogun, P. N. Meduna	36-41
ACFWM 09	Climate Change and Resulting Effects on Agricultural Productivity C. H. Abo	42-44
ACFWM 10	Depleting Forest Resources: A Threat to Sustainable Agriculture O.D. Chukwuemeka	45-48
ACFWM 11	Derreservation: A Gateway to Decimation of The Ogba Forest Reserve, Edo State M. O. O. Isese and N. N Akemien	49-52
ACFWM 12	Early Growth of <i>Parkia biglobosa</i> (Jacq) Under Different Levels of Organic Manures R. B. Mukhtar ¹ and M. A. Mansur	53-56
ACFWM13	Ecological Impacts and Effects of Land Reclamation in Laba and Keita Districts M. Atiku ¹ , O. A. Liman, I. Umar ¹ , D. P. Gwimmi, A. S. Ambursa and Mansur M. A	57-61
ACFWM 14	Effect of Pre-Sowing Treatments in Breaking Seed Dormancy and Seedling Establishment of Date Palm (<i>Phoenix dactylifera L</i>) I. A. Zagga ¹ , D. Oguche ¹ , R. B. Mukhtar ¹ B. R. Wali ¹ , M. B. A. Garko ¹ and A. K. Nafiu ²	62-66
ACFWM 15	Effects of Climate Change and Deforestation on Availability and Diversity of Non-Timber Forest Products in Nigeria C. O. Ezekwe, R. A. Ugwu and O. O. Ovuike	67-68
ACFWM 16	Effects of Climate Change and Deforestation on Soil and Water Conservation in Eastern Nigeria C. O. Ezekwe, R. A. Ugwu and O. O. Ovuike	69-72
ACFWM 17	Environmental Effects on Urban Agro-Ecological Zones of Developing countries O. A. Sangotoyinbo and E. A Owoeye	73-77

	Evaluation of Sustainable Forest Strategies among Rural Farming Populace in Kogi and Niger States, Nigeria U. Mohammed¹, I. S. Umar², R. S. Olaleye², I. S. Tyabo², J. H. Tsado², J. J. Pelemo², and A. Ismaila	78-81
ACFWM 18		
	Farmer Perception of the Effect of Climate Change on Rice Production in Niger State, Nigeria I. L. Alhassan¹, I. S. Umar², U. Mohammed³, N. S. Usman⁴, M. B. Abubakar⁵ and J. J. Pelemo²	82-89
ACFWM 19		
	Forests in Nigeria: Challenges facing Sustainable Management M. O. O. Isese	90-92
ACFWM 20		
	Geography and Climate Change Education for Environmental and National Development M. A. Audu	93-96
ACFWM 21		
	Growth Performance of <i>Dennettia tripetala</i> as influenced by different Nutrient sources T. O. A. Adeyemi¹ and M. O. O Isese	97-100
ACFWM 22		
	Home garden: A Sustainable Option For Carbon Sequestration And Food Security. Koyejo A. O¹., Ugwu, R. A¹., Koyejo, O. A²., Okpara, I. G.	101-106
ACFWM 23		
	Impacts of Climate Change and Deforestation on Sustainable Wildlife Resources in Nigeria V. E. Edohoeket, C. O Ezekwe and O.O. Ovuike	107-110
ACFWM 24		
	Impact of Climate Change on Agricultural Productivity in Nigeria O. N. Sulaiman, S. A. Adedokun, A. G. Adebayo and A. B. Alarape	111-116
ACFWM 25		
	Impact of Climate Change on Forestry Practices in Zamfara State Umar I, Atiku M.², Gwimmi D. P. and Abdulrahman A.	117-121
ACFWM 26		
	Maize Producers' Cultural Practices Exacerbating Climate Change in Katsina State, Nigeria: the way Forward J. Musa¹, A. L. Ala²., A. A. Yakubu², M. Musa³, S. A. Beli¹ and S. S. Barau¹	122-126
ACFWM 27		
	Participation of Farmers in Beekeeping and Prospects in Obanliku Local Government Areas, of Cross River State, Nigeria S. R. Ajayi, A. A. Ihidero. E. A. Irunokhai and P. H. Vonneh.	127-130
ACFWM 28		
	Performances of <i>Hevea</i> genotypes at different drought Stress periods in Ultisols of South Eastern Nigeria J. N Korieocha, K. O Orunwense and O. N Nwabueze	131-136
ACFWM 29		
	Profitability Assessment of Honey Production in Gombi Local Government Area, Adamawa State, Nigeria. G. S. Mamman¹, B. T. Kwaga¹ and A. Jibrailu²	137-140
ACFWM 30		
	Prospect Utilization of Bamboo based Agroforestry in Nigeria F. Kazeem Ibrahim, O. I. Asinwa and J. M. Ajekigbe	141-144
ACFWM 31		
	Sustainable Agro-Forestry Practices as a means of Climate Change Mitigation A.O. Olaitan¹, O. N. Sulaiman, A. G. Adebayo², S. A. Adedokun²	145-150
ACFWM 32		
	The Benefits of Agroforestry Practices in Wamakko Local Government Area, Sokoto State, Nigeria. Gwimmi, D. P¹., Umar, I¹., Atiku, M¹., Nafiu A. K¹., Wele, H. K². And	151-154
ACFWM 33		

Daboh U. M²

ACFWM 34	The Role of Women Participation in Tackling Climate Change Issues Through Environmental Management and Protection in Nasarawa State, Nigeria C. U. Adiele-Ezekiel, F. N. Nwakor, N. N. Okoye, J. C. Eluwa and C. Daniel-Ogbonna	155-161
-----------------	---	----------------

AGRONOMY

AG 01	A Preliminary Investigation on the Effect of Harvesting Frequency on Okro Fruit Yield in Owerri, South Eastern Nigeria C. P. Poly-Mbah, J. I. Offor, M. C. Ikwuegbu, and I. Ekoja	1-4
AG 02	Adopting Additive Intercropping for the Production of Maize and Mungbean Utobo E.B., Ogbodo E.N., Ekwu, L.G.¹, Nwokwu, G.N. and Nwanchor, K.C.,	5-10
AG 03	Comparative effects of mineral fertilizer, broiler manure and local chicken manure on the growth parameters and yield of maize/soybean intercrop M. Alfa, P.A Ibrahim, I.N.Kolo, A. Apuyor, J.N Eze, A. Umar, and N.N Ayanniyi	11-15
AG 04	Date Palm Production: A Review of its Past, Present and Advances in Cultivation in Nigeria B. A. Essien, J. B. Esiiien and D. O. Azu	16-21
AG 05	Determinants of farm-level productivity of cassava farmers under sole and mixed cropping systems in Niger State, Nigeria A. O. Ojo, F.N. Aransiola and M.A. Ojo	22-28
AG 06	Effects of Decomposed Banana Peels and NPK Fertilizer on Soil Fertility Properties, Growth and Yield of Groundnut (<i>Arachis hypogaea</i>) in Unwana, South Eastern Nigeria D. E. O. Azu, N. Uche and A. J. Nwanne	29-33
AG 07	Effect of different levels of phosphorus on growth and yield of chickpea (<i>Cicer arietinum</i> L.) varieties in Sudan Savanna Agro-ecology of Nigeria S M Shehu, S Ali, A A Muhammad, Z Y Muhammad, L. Muhammad, H. Mohammed	34-38
AG 08	Effect of different Organic Manure on the Growth and Yield of Eggplant (<i>Solanum melongena</i>) in Umuagwo, South-Eastern Nigeria Obasi S. N., Obasi C. C., Chijioke M. C.	39-43
AG 09	Effects of Different Rates of NPK 15:15:15 on Growth and Yield Performance of Maize (<i>Zea mays</i>) K. O. Sanni, J. M. Adesina and O. O. Fatoye	44-48
AG 10	Effect of Hot Water and Dilute Acid Treatment on Breaking the Seed Dormancy of African Locust Bean (<i>Parkia biglobosa</i> L.) and Tamarind (<i>Tamarindus indica</i> L.) A.A. Fagge and F. Y. Abdulkareem	49-51
AG 11	Effects of Lime and Poultry Manure on Vegetative Growth of Maize (<i>Zea Mays</i> L.) in Selected Agro Ecological Zones Of Nigeria	52-55

S. L. Ya'u and A. I. Sharifai

AG 12	Effects of Nitrogen and Sulphur on Wheat (<i>Triticum aestivum</i> L.) and Soybean (<i>glycine max</i>) (L.)Merr) in Sudan Savanna Ecological Zone of Nigeria B. Barau, M. S. Dan azimi, A. A. Funmi, S. S. Jibia, and S. O. Ajayi	56-60
AG 13	Effects of Plant Spacing on the Growth and Yield of African Egg Plant (<i>Solanium macrocarpon</i>) in the Northern Guinea Savannah of Nigeria M. K. Ndagana, A. Buba, A. Saidu	61-64
AG 14	Effects of Sequential Planting of Vegetable Cowpea on Growth and Yield of Some Cassava Varieties in Cassava-Vegetable Cowpea Intercrop Okafor, A. C., Mbah E.U. and Mazza M.	65-70
AG 15	Effects of Spacing and Muriate of Potash on Leaf Nutrient Composition, Growth and Yield of Sweetpotato in Kabba, Kogi State, Nigeria S. K. Ogundare, , K. Olajide and M. O. Alemoru	71-78
AG 16	Effects of Tillage and Seed Coating with Rhizobium Inoculants on N Uptake and Harvest Index of Soybean in the Northern Guinea Savanna Alfisols of Nigeria J. O. Omeke, A. A. Yakubu and B. Agah	79-83
AG 17	Effects of Different Levels of Poultry Manure on The Growth and Yield of Sweet Pepper (<i>Capsicum annum</i> L.) A.A. Fagge and Y. A. Bamidele	84-86
AG 18	Effects of Lime Rates and Varieties on Yield and Yield attribute of Groundnut (<i>Arachis hypogaea</i> L) in Northern Guinea Savanna of Nigeria B. U Agah, E. O Idehen, R. O Agbor, and J. O Omeke	87-91
AG 19	Effects of Organic Manure and Npk Fertilizer on the Yield And Performance of Sweet Potato Varieties (<i>Ipomoea Batatas</i> (L) Lam in Nyanya, Fct, Abuja T.O Sijuwola, A. Saidu, P.A Tsado I. N Onyekwere	92-96
AG 20	Effects of Mulching Materials on the Growth and Yield of Watermelon (<i>citrullus lanatus</i>) in Southeastern, Nigeria. G. C. Okeke, J. A. Ibegbulem, E. Onu Grace, T. Lydia Sangotope, A. Haruna, A. Al-mustapha, A. A.Yusuf² and P. O. Orji	97-100
AG 21	Effects of Phosphorus Fertilizer on Agronomic and Yield Performance of Cowpea (<i>Vignaunguiculata</i> (L)) walp) in Jalingo, Nigeria E. A. Jandong and E. O. Adegboyega	101-105
AG 22	Evaluation of the Performance of Some Beta Carotene Cassava Varieties in Relation to Different Fertilizer Sources and Rates in South Eastern Nigeria Obasi C.P, Chukwu L.I, Nnabue I. and Nwankwo I.I.M	106-108
AG 23	Growth and Development of Habanero Pepper (<i>Capsicum chinense</i> L.) Varieties as influenced by Farmyard Manure, Weed control And intra Row spacing A. Y. Abubakar, L. Aliyu, D. I. Adekpe, M. A. Mahadi, B. A. Babaji, A. I. Sharifai, A. A. Mukhtar. A. Ma'azu	109-114
AG 24	Growth and Seed Tuber Yield of Potato (<i>solanum tuberosum</i> l.) Varieties as influenced by Intra-row spacing and Potassium fertilization on the Jos Plateau	115-119

G. L. Daure and N.A. Gworgwor

AG 25	Growth and Yield of Irrigated Wheat Varieties as Influenced by Sowing Method and Fertilizer Treatments in Northern Guinea Savanna of Nigeria A. S. Wali, A. A. Muhammad, A. I. Sharifai, I. U. Abubakar	120-126
AG 26	Growth and Yield responses of Pungent and Non- pungent Peppers (<i>Capsicum annum</i>) to Nitrogen Fertilizer rates G. N. Nwokwu and E. B Utobo	127-131
AG 27	Growth Response and Proximate Analysis of <i>Amaranthus caudatus</i> on Different Rates of Pig Dung I.M. Oludunsin, A. F. Ogundola, T. A. Yekeen, A. Shaahu, U. Aliyu, A. B. Umaru, J. O. Okoh, E. A. Ochigbo, G. C. Nnamani, B. A. Ocheni. and G. G. Jibung	132-137
AG 28	Influence of Nitrogen and Poultry Manure on Growth and Yield of Tomato (<i>Lycopersicon esculentum</i> Mill) in a Semi-arid Environment M.S. Isah and A. G. Adesoji	138-141
AG 29	Influence of urea supergranule, rate and time of bio-stimulant application on the performance of some growth component and yield of Rice (<i>Oryza sativa</i> L.) in Sudan Savanna. I. J. Umoh, A. I. Sharifai, J. A.Y. Shebayan, A. S. Isah, H. M. Ubandoma	142-148
AG 30	Morphology, Agronomy and Utilization of Polynesian arrowroot (<i>Tacca leontopetaloides</i> (L.) Kuntze) in Nigeria C. N. Ebeniro, C. O. Amadi, A. G. Ironkwe, and C. C. Nwokocha	149-152
AG 31	Optimization of Fertilizer Application Dose for Maize (<i>Zea Mays</i>) Grown with Waste Water from Fish pond G. C. Okeke, a. Ibrahim, a. Al-mustapha, e. Onu grace, a. Haruna, k. C. Nwanchor, p. O. Orji	153-155
AG 32	Performance of lowland rice as influenced by method of planting in sawah rice technology. S. O. Adigbo, I.O. Vaughan, C.I. Alarima, C.G. Afolabi, C.A. Onifade, J.N. Odedina, T.O. Fabunmi, N. O. Adeyemi	156-160
AG 33	Performances of Maize in Maize/Cassava Intercrop as influenced by Four different Times of Planting in Derived Savannah. S.O. Adigbo, P. U. Odueme, J. N. Odedina, T. A. Coker, T.O. Fabunmi, J. Fadeyi and , C. Appah	161-164
AG 34	Physiological Responses of Cowpea (<i>Vigna unguiculata</i> (L.) walp) varieties Cultivated in Relay with Pumpkin-Maize mixture treated with Poultry manure and nitrogen fertilizer in Samaru B. U. Agah, A. B. Lawal, N. Abdul and A. I. Sharifai	165-169
AG 35	Response of Chickpea (<i>cicer arietinum</i> L.) Varieties to <i>rhizobium</i> inoculation in Sudan Savanna Ecology S M Shehu, S Ali, I. Muhammad, A.A Maigatari, L. Muhammad, G. Ibrahim	170-173
AG 36	Response of Cowpea (<i>Vigna unguiculata</i> (L) Walp) Varieties to Irrigation Frequency and Plant Population in Sudan Savannah Ecology A. A. Muhammad A. Ahmed A. I. Sharifai, M. S. Isyaku and L Musa	174-177
AG 37	Response of maize (<i>zea mays</i> L.) And soybean (<i>glycine max</i> L. (merr) to	178-181

soybean variety and row arrangement in maize-soybean mixture
**A. A. Muhammad, E. Danlukata, Y. Hussaini, S. B. Kagula
and B. M. Usman**

AG 38	Response of Pigeon Pea (<i>Cajanus cajan</i> l. Millisp) Inoculation with Nigerian Indigenous Rhizobia Isolates A. A. Abdullahi	182-187
AG 39	Response of Scent Leaf (<i>Ocimum gratissimum</i>) to Plant Spacing, Pruning, Heights and Seasons in Delta State K. Atusa, and I. S. Chukwueklue	188-192
AG 40	Review of Soil Contamination and Uptake of Heavy Metals by Plants J. I. Ofor	193-196
AG 41	Soil fertility indices, growth and yield properties of groundnut (<i>Arachishypogaea</i>) as influenced by termite mounds and urea in Unwana, Southeastern Nigeria. D.E.O. Azu, B.A Essien and N. Uche	197-202
AG 42	Soybean Production in a Varied Nigerian Soil, A Critical Review P.C. Lemibe, B.O. Ehirim, A.B Umar, G.C. Nwanyanwu, and N.G. Aneke	203-207
AG 43	Symbiotic Effectiveness of some Nigerian Indigenous Rhizobia rhizobia strains on Samnut 24 Groundnut (<i>arachis hypogaea</i> l.) Genotype A. A. Abdullahi	208-213
AG 44	Tillering Dynamics of rice under elevated CO ₂ condition N. Vinothini, V. Manonmani S. Karthikeyan, R.K. Bhavyasree and A. Isong	214-217
AG 45	Yield and Yield Component of Tomato as Influenced By NPK Fertilizer and Farm Yard Manure Rate in the Nigerian Savannah I. O^{1*}, Semiu, B. A. ¹Babaji, A.S, ¹Isah, B.M ¹Usman, A. ¹Habib, L. ¹Musa. and H.O ²QASIM	218-222
AG 46	Yield and yield components of okra as influenced by nutrient composition of soil after harvest of different legumes C. J. Okonji^{ac}, E. O. Ajayi^b and J. B.Oyerinde^a	223-227
AG 47	Yield Performance of Component Crops as Influenced by Groundnut Variety and Plant Arrangement in Groundnut Maize Mixture at Samaru, Nigeria H.O. Olafemi, A. A. Muhammad, S. B. Kagula and M. S. Isyaku	228-230

ANIMAL SCIENCE AND FISHERIES

ASF 01	Ameliorative Potential Of Curcumin on Oxidative Stress Induced by Benzo[a]pyrene Formed in Smoked Fish in Albino Rats O. Y. Kolade and T. A. Oladiji	1-6
ASF 02	An Assessment of Poultry Production among Residence in Kogi State, Nigeria A. B. Mohammed	7-12
ASF 03	Analysis of Production and Profitability of Broiler Production in Umuahia Metropolis of Abia State, Nigeria.	13-17

S.I. Ogbonna

ASF 04	Blood Chemistry of Rabbits fed diets containing differently processed <i>Leucaena leucocephala</i> leaf meal Adekojo, S. A.	18-22
ASF 05	Comparative Performance of Broiler Chickens fed graded levels of Sorghum SK-5912 (<i>Sorghum bicolor</i> L. Moench) and Pearl millet As dietary Energy sources O. A. Lakurbe, U. D. Doma, M. Abubakar, K. M. Bello, Y. A. Garjila and J. J. Okoh	23-27
ASF 06	Condition Factors and Length-Weight Relationship of Fish Species in Mai-Allo Pond, in Gwale Local Government, of Kano State, Nigeria K. M. Maryam, A. Hassan, S. A. Mohammad and M. U. Aminu	28-32
ASF 07	Determinant Factors to Profitability of Pig Production in Ivo Local Government Area of Ebonyi State, Nigeria M O Okoronkwo and Ume, S I	32-35
ASF 08	Determinants of catfish production in Nigeria: a case study of Nsukka area of Enugu State NwaJesus Anthony Onyekuru, Oguejiofor Okorie, Emilia Ugwu and Uchechi M Nwokorie	36-40
ASF 09	Economics of Broiler Production in Oji River Local Government Area of Enugu State, Nigeria V.C. Emehute, C. I.Emehute and M.O Okoronkwo.	41-43
ASF 10	Effect of Dietary Energy Levels on Nutrient Retention of Laying Pullets in the Semi-Arid Environment H. B. Usman and S. Garba	44-45
ASF 11	<i>Effects of Dietary Mixtures</i> of Industrially produced Brewers Dried Grains and locally produced Sorghum Brewers Dried Grains meal on the <i>Carcass characteristic</i> of Rabbits H. Ibrahim	47-50
ASF 12	Effects of feeding Diets containing Capsaicin from red hot pepper (<i>Capsicum annum</i>) on the growth performance of Marshal Broiler Chickens A.U. Obasi, S.S.A. Egena, B.O. Otu, O.B. Ocheme	51-54
ASF 13	Effects of Replacement of soaked Mango seed kernel meal (<i>kanbiri</i>) with maize with and without Enzyme supplementation on digestibility of Japanese Quail Hussaini Ahmad Musa	55-58
ASF 14	Enumeration and Biochemical Identification Of The Skin Bacterial Flora Of Two Marine Fishes J. O. Aguta and O. A. Agwu	59-61
ASF 15	Farm Fish Marketing System: A case study of Eriwe Fish farm village Ijebu-ode, Ogun State, Nigeria. M.A. Matanmi, M.M., Abdullahi, I.A., Oke	62-68
ASF 16	Fish farmer's perception, awareness and strategies of reducing the impact of climate change on fish production in New Bussa, Niger State, Nigeria. M.M Abdullahi and Aliyu F.	69-73

ASF 17	Gastrointestinal Parasite Prevalence in Breeds of Sheep in Gombe State Boyi, B., Mbap, S. T., Amaza, I. B. and Ibrahim, Y.	74-76
ASF 18	Genetic Variation of <i>Chrysichthys nigrodigitatus</i> Populations from Some Nigerian Coastal Waters E. A. Ukenye, and I. Megbowon	77-79
ASF 19	Growth and Carcass Characteristics of Indigenous Breeds of Goat (Buck) in Nigeria N.N. Ayanniyi , P.A Ibrahim, I.N. Kolo, A., M Alfa, J.N Eze, S.D Audu, F.O. Adesanya, U. Abubakar and E. Okhaume, O.O Olusola and A.B Omojola	80-85
ASF 20	Growth Patterns and Condition Factor of Five Fish Species of Sciaenidae Trawled from Nigerian Coastal Water. Omogoriola Hannah Omoloye	86-91
ASF 21	Growth Performance and Reproductive Characteristics of Breeder Snails (<i>Archachatina Marginata</i>) Fed Groundnut Cake at Varying Levels of Inclusion J. N. EZE	92-96
ASF 22	Heavy metal content of some fishmeal samples within Lagos Metropolis, Nigeria Y.B. Adeyemi, B. Edah, A. I. Oke	97-101
ASF 23	Heavy Metals concentration in the Muscle tissue of Blue Crab (<i>Callinectes amnicola</i>) from Lagos lagoon, Southwestern, Nigeria A. O. Abraham-Olukayode, F. C. Egbe, M. Musa, S. H. Rayyan, O. O. Olajuyigbe, C. E. Oramadike, A. B. Aborisade, H. Yusuf, and O. A. Adejonwo	102-104
ASF 24	Histomorphological Studies on the Oviduct of Two Genotypes of Chicken in Nigeria M. A. Mahmud, P. Shaba, A. Danmaigoro, A. Bello, A.D. Usman,W. Abdulsalam, A.M. Ahmad, A.A. Mohammed and M. Maaji	105-108
ASF 25	Incidence of Non-degradable Materials in the Rumen of Small Ruminants Slaughtered at Mariri Abattoir, Kano State M. Y. Ahmad	109-112
ASF 026	Interaction of parity and genotype of genes in the hypothalamus-pituitary-gonadal axis on litter size in West African Dwarf goats A. M. Isa, M. N. Bemji, A. Sa'adu , A. Dahiru and B. B. Abubakar	113-116
ASF 27	Lipid Profile and Heamatological Parameters of <i>Clarias Gariepinus</i> Fed Ginger (<i>Zingiber Officinale</i>) Supplemented Diet O. A. Adejonwo and A. A. A. Adetoye	117-120
ASF 28	Nutritional Composition of some Fishmeal Samples within Lagos Metropolis, Nigeria Edah Bernard., Adeyemi Yewande. B., Oke Adetola. I.	121-124
ASF 29	Nutritional Evaluation of Mopane Worm (<i>Imbrasia Belina</i>): Prospects For Use as Fishmeal Replacer Edah Bernard	125-129
ASF 30	Performance Characteristic of Broiler Chickens fed with Ginger (<i>Zingiber officinale</i>) Additive in Diets.	130-135

M. S. Yahaya, S. Abdulsalamand S. Isyaku

ASF 31	Potential of Gmelina leaf meal to replace palm kernel meal in West African dwarf goat diets and its influence on carcass indices P. C. Jiwuba, N.L. Azodo, R.C. Akazue, F.O. Ahamefule and K. Ikwunze	136-139
ASF 32	Production Pattern and Constraints of Fish Farmers in Kainji Lake Basin, Nigeria B. A. Ibeun, A. Adewumi, A. A. Ogunleye, K. O. Arowolo and E. A. Irunokhai	140-143
ASF 33	Productivity of Fish Farming Households in Kainji Lake Basin, Nigeria B. A. Ibeun, A. Adewumi, A. A. Ogunleye, J. J. Pelemo and C. A. Jeje	144-147
ASF 34	Profitability Analysis of Catfish Production in Kaduna North Local Government Area of Kaduna State. Kaduna, Nigeria K. O. Mohammed, Z. A. Usman, S. Ibrahim	148-152
ASF 35	Relationship between Standard Length, Weight and Girth of <i>Gymnarchus Niloticus</i> from Katcha River, Niger State, Nigeria M. K. Yusuf, S. M. Tsadu, S. L. Lamai and A. T. Yisa	153-155
ASF 3	Response of grower rabbits fed soybean curd residue-based diets S. D.Sudik, I. Ajiji and I. B. Amaza	156-159
ASF 37	Seasonal Variation of Bacteria Load on Fresh Fish from Igbokoda, Ondo State Bello A., Agwu O.A., Oluwagunke T.O., Ebohon, J., and Yakub A.S	160-163
ASF 38	Survey, collection and culture of Calanoid copepod, <i>Acartiatonsa</i> from Five Cowrie Creek, Lagos, Nigeria M. R. Ajijo, M. M. Abdullahi and M. R. Matanmi	164-166
ASF 39	The Potentials of Toasted Bambara Nut (<i>Voandzeiasubtervanea</i>) Based Diets as Feed Ingredient for <i>Clariasgariepinus</i> Fingerlings A. P. Adagbo	167-170
ASF 40	Weight and Hematology of Domesticated Guinea Pigs (<i>Cavia porcellus</i>) Fed <i>Corchorus olitorius</i> L; <i>Amaranthus palmeri</i> and Local Maize Offal (Dusa) W.A. Jayeoba and N.B. Obekpa	171-174
ASF 41	Cost Effectiveness of Fattening Yankasa Rams Fed with Untreated, Urea, lime and Urea plus Lime Treated Groundnut (<i>Arachis hypogaeae</i>) shell in a Complete Diet Maru L.R., Bello M. D., Lamidi O. S., Audu S. B., and R. J. Tanko	175 - 177

CROP PROTECTION

CP 01	Analysis of the Differential Efficacy of some Dosages of Selected Insecticides Baited with Nulure on Adult stages of <i>Bactocera invadens</i> (Diptera: Tephritidae) G. Abdullahi, D. Obeng-Ofori, K. Afre-Nuamah, and M. K, Billah	1-5
CP 02	Antifungal Efficacy of three Botanical Extracts on Red Rot Pathogen (<i>Colletotrichum falcatum</i>) of Sugarcane (<i>Saccharum officinarum</i>) J. M. Egubagi, M. O. Adebola, A. Abubakar and U. S. Maishera	6-9
CP 03	Antimicrobial Activity of <i>Passiflora edulis</i> (Sims) Leaves Extract on Selected Micro-organisms.	10-14

	Olatunji, O.A. and Bolaji, O.O.	
CP 04	Appraisal of synergism of a biofumigant, plant activator and grafting on severity of bacterial wilt of tomato S. A. Ganiyu, A. R. Popoola , O. A. Enikuomihin and J. G. Bodunde	15-20
CP 05	Assessment of Biocontrol measures as alternative means of controlling some fungal diseases of Agricultural crops. R.A. Ugwu, C.O. Ezekwe, O.O. Ovuike.	21-25
CP 06	Biological Pesticides and Food Safety V.R. Bakpolor	26-29
CP 07	Control of Sweetpotato Root Rot (Umuspo3) using Leaf Extracts of AzadirachtaIndica andCaricaPapaya L. O.F. Kolawole and O.O. Kolawole	30-32
CP 08	Control of Yam Tuber Rot with Extracts of Allum sativum and Zingiberofficinale Q. U. Ano, C. O. Nwadili and T. J. Onyeka	33-36
CP 09	Correlation Studies on Incidence and Severity of Soybean Foliar Diseases, Growth Parameters on Yield of selected Soybean [glycine max (l.) merrill] Lines S. Salihu, E. T. Omisope, E. Onotugoma, M. C. Onwuegbu, A. M. Shema, and A. Y. Mumeen	37-41
CP 10	Diversity of insect pests of paddy rice in selected areas of Nupe-Gbagyi Land of Niger State, Southern Guinea Savannah of Nigeria S. Danjuma, A.S.I. Gudugi, M. Mahmud, and S. Yusuf	42-45
CP 11	Effects of Black Plum (Vitex doniana) Bark Powder on Root Knot Nematodes Meloidogyne javanicaInfestation and Performance of Okra Abelmoschus esculentus L. in Screen House M.Y. Jada, A. Haruna, and A. N. Mohammed	46-50
CP 12	Effect of duration and methods of storage on the development and survival of Callosobruchus maculatus F. (Coleoptera: Curculionidae) on Phaseolus vulgaris L. S. Danjuma, A.S.I. Gudugi and S. Yusuf	51-55
CP 13	Effects of selected method of weed control on the performance of four cultivars of cocoyam C. G. Michael and C. Eyab	56-59
CP 14	Elicitation of secondary metabolites by foliar application of turmeric based elicitor (preliminary study) C. I. Harbor and W. Uka	60-62
CP 15	Evaluation of Sweet almond andFennel essential Oils for the Control ofCowpea Bruchids (Callosobruchus maculatus (F) Infesting stored Cowpea seeds A. Audu , F. M. Gambo, M. Kingimi and M. A. Wolgo	63-66
CP 16	Evaluation of the susceptibility of four cowpea (Vigna unguiculata) varieties to attack by Callosobruchus maculatus (F.)(Coleoptera: Chrysomelidae). Audu, F. M. Gambo, M. Kingimi and D. Idris	67-70
CP 17	In vitro Efficacy of Plant Extracts on Fungal Pathogens of tomato Fruits at Wukari, Taraba State	71-75

	B. A. Tunwari, A. G. Labaran and P. O. Aji	
CP 18	Integrated nitrogen fertilizer and organic manure for soil nutrients replenishment on striga infested fields. R. Abdullahi	76-79
CP 19	Isolation, Identification and Pathogenicity of Fungi associated with the Postharvest Rot of Orange-Fleshed sweetpotato in Umudik. E. A. Alum, J. I. Reuben-Kalu, E. E. Amajor and C. J. Eluagu	80-83
CP 20	Nematicidal Efficacy of Soil Fungal Isolates on the Root-Knot Nematode (<i>Meloidogyne incognita</i>) of Tomato U. S. Maishera, M. O. Adebola, J. M. Egubagi and A. Abubakar	84-87
CP 21	Potentials of Soursop (<i>Annona Muricata</i>) and Kapock Tree (<i>Ceiba Pentandra</i>) Extracts in the Control of Rice Pathogens B. A. Yekini; O. D. Alade; K. A. Adewuyi; S. O. Nwafor; A. D. Oyeleye and O. C. Olejeme.	88-91
CP 22	Response of Some Fungicides in the Control of Taro Leaf Blight of Colocasia in Umudike, Nigeria U.E.C.Cyprian and M.N.Onuba	92-94
CP 23	Response of Sorghum Varieties to Pre-emergence Herbicides in Southern Guinea Savanna of Nigeria Gani, M., Shinggu, C.P. and Malia, M.	95-99
CP 24	Screening of Rice Genotypes for Resistance to Blast and Brown Plant Hopper J. OMbe, R. Saraswathi, A. Ramanathan, S. Manonmani, R. P. Soundararajan, and P. Jeyaprakash	100-105
CP 25	Survey of weed hosts of Blackeye cowpea mosaic virus and Cowpea mottle virus (CPMoV) at Mokwa, southern guinea savanna, Nigeria A. A Ahmed, L. R. Muhammad, M. A. Saidu, A. G. Usman, M. U. Kuspa, A. Abbas and M. Yakubu	106-110
CP 26	The Efficacy of Some Fungicides in the Control of Root Rot of <i>Xanthosoma</i> in Umudike, Nigeria U.E.C. Cyprian and M.N. Onuba	111-113
CP 27	Utilization of Indigenous Weed Management Techniques among Cocoa Farmers in Akamkpa Local Government Area, Cross River State, Nigeria J. B. Effiong and C. L. Aboh	114-119
CP 28	Weeds as Collateral Host for Sugarcane Phytoplasmas in Nigeria Bassey M.S., Wada, A.C., Olaniyan O. B., Gbadeyan S. T., Onyia K. C. and Onotugoma E.	120-124
CP 29	Castor; its uses and diseases Gbadeyan S. T., Maji E. A., Yusuf I. A., Saliu. B. Z., Olaniyan O. B., Adesanya F. O., Onyia. K. C., Onotugoma E. H, Hadiza A.B and M.O Kolade	125-129

GENETICS, PLANT BREEDING AND BIOTECHNOLOGY

	A Review of the Variability in the Flesh Root colour of Sweet potato as Evidence of Varietal Differentiation and their Uses	
GPBB 01	I. I. M. Nwankwo and T. C. Njoku	1-5
GPBB 02	Additive main effects and Multiplicative Interaction analysis for grain yield performance in Sesame (<i>sesamun indicum l.</i>) Genotypes A. Ismaila, A. Usman, Mohammed K. M., Mumeen Y., Tauhid, G. and Joseph, O.	6-10
GPBB 03	Agro-Morphological Performances of Rice Seeds from Selected Certified Seed Producing Bodies in Nigeria A. A. Salawu, A. S. Gana, H. Ibrahim, A. T Maji, F. O. Adesanya, and M. A. Adebisi	11-14
GPBB 04	Beneficial and Harmful effects of Genetically modified Food Crops A. Ibrahim	15-17
GPBB 05	Biodegradation of Wool Using <i>Streptomyces Albidoflavus</i> G. C. Nnamani, A. Shaahu, A. B. Umar, B. O. Ehirim, S. Gbadeyan, E. O. Nwanyanwu and P. C. Lemibe	18-23
GPBB 06	Biotechnology: A Review of Issues and Concerns E. A. Owoeye and O. A. Sangotoyinbo	24-27
GPBB 07	Breeding of High Yielding and Dwarf <i>tenera</i> Oil Palm t: A Resilient Oil Palm Planting Material for rapid changing Climate Ibrahim Wasiu Arolu, Mohd Rafii Yusop, Marhalil Marjuni, Olalekan Kazeem Kolapo Arolu Fatai Ayanda, Bello Inuwa, Rajanaidu Nookiah	28-33
GPBB 08	Characterization of some Castor germplasm using Simple Sequence Repeats (SSR) Markers B. Z. Salihu, A. A. Ajadi, A. Ismaila, B. O. Apuyor, M. A. Kabaraini, H. Shehu, and N. M. Ishaq	34-37
GPBB 09	Correlation, Path Coefficient and Regression Studies in some Advanced Lines of Soybean Grown in Southern Guinea Savannah of Nigeria G. O. Abimaje, T. Vange, D. K. Adedzwa, A. Shaahu, B. A. Ocheni and G. C. Nnamani	38-45
GPBB 10	Effects of Plant Growth Promoting Rhizobacteria (PGPR) on growth performance of Semi-Autotrophic Hydroponics (SAH) derived cassava plantlets U. E. Okoroafor, I. C. Okwuonu, G.N. Nsofor, J. T. Onyeka, C. N. Egesi	46-48
GPBB 11	Estimation of Gene effects for Seed yield contributory characters in castor by Generation Mean Analysis B. Z. Salihu, M. N. Ishaq, I. A. Yusuf, A. A. Ajadi, M. A. Kabaraini, H. Shehu, B. O. Apuyor and A. Ismaila.	49-53
GPBB 12	Estimation of Path Coefficients for Seed yield component Traits in Castor B. Z. Salihu, H. Shehu, M. A. Kabaraini, A. Ismaila, M. N. Ishaq, I. A. Yusuf, B. O. Apuyor and A. A. Ajadi	54-58
GPBB 13	Evaluation of pollen viability in cashew (<i>Anacardium occidentale L</i>) as affected by age of trees and canopy section in two ecological zones of Nigeria M. Baba-Nitsa, A. C. Odiyi, L. S. Fayeun and M. Idrisu	59-64

GPBB 14	Evaluation of some rice lines for iron toxicity tolerance B. O. Abiwon, A. S. Gana, P. A. Tsado, B. Z. Salihu and O. F. Ajaye	65-68
GPBB 15	Genetic variability and heritability studies of some reproductive traits in cucumber O. A. Umeh, C. C. Obasi and E. R. Keyagha	69-74
GPBB 16	Haploids Production and their Application in Crop Improvement G. G. Jibung, T. Vange, T. S. Msaakpa, J. O. Okoh, A. Shaahu and G. C. Nnamani	75-78
GPBB 17	Identification of Simple Sequence Repeat Markers Associated with Fusarium Wilt Resistance in BC ₂ F ₁ Population of Watermelon (<i>Citrullus lanatus</i> L) Kazeem K. Olalekan, Mohd Y. Rafii, Ibrahim W. Arolu, Abiola E. Ojeleye and Micheal S. Afolabi	79-82
GPBB 18	Identification of Superior Donor Parents for Spike Characters in Castor B. Z. Salihu, M. A. Kabaraini, M. N. Ishaq, A. A. Ajadi, A. Ismaila, I. A. Yusuf, B. O. Apuyor and H. Shehu	83-86
GPBB 19	Improving Breeding Value of Yellow Root Cassava (<i>Manihot Esculenta</i> Crantz) Genotypes in Nigeria H. Ogbuekiri, D. N. Njoku, J. Onyeka, C. Amadi, A. O. Olojede C. N. Egesi and A. S. Nwaogu	87-89
GPBB 20	Morpho-agronomic characterization of some cucumber germplasm for yield and yield associated traits in Owerri-west southeastern Nigeria. O. A. Umeh, A. A. Ngwuta, G. C. Onyishi and C. P. Anyanwu.	90-95
GPBB 21	Nutrient mapping for improved cotton <i>gossypium</i> spp yield and fiber quality using geographic information system H. Isah, M. S. Mohammed, A. Alhassan, H. Ramadan, O. O. Abogun, H. A. Ahmed, E. O. Ovosu, S. Ahmed, I. Ahmed, Z. T. Jibril and J. Abdulsalam	96-103
GPBB 22	Performance of Selected Yellow Flesh Cassava (<i>Manihot Esculenta</i> Crantz) Genotypes for Root Yield and other Agronomic Traits in Nigeria H. Ogbuekiri, D. N. Njoku, J. Onyeka, C. Amadi, A. O. Olojede, C. N. Egesi and K. U. Eluwa	104-106
GPBB 23	Selection of Marketable Tubers from Genetically Diverse Morphological Characters of Hybrid white yam (<i>Dioscorea rotundata</i>) Progenies I. M. Nwankwo, O. K Akinbo, and G. U Okonkwo	107-111
GPBB 24	Small RNAs: Advancement in Agriculture and Alternative Approaches to Plant Disease Management in Africa J.O. Nwogwugwu, Anicet A. Batcho, and O. A. Osunlaja	112-115
GPBB 25	Sustaining Biodiversity in a Technological Planet: From Communication Extension to Resilient Ecosystem E. A. Afolabi and I. Annatte.	116-120
GPBB 26	The Role of Genetics in Fish Culture I. Megbowon	121-124
GPBB 27	Trait Preferences and Important Cultivar Characteristics that Influence Choice of Sweet-potato Cultivars by Abia State Farmers S. O. Afuape, A.B. Adesina, G. Nwaigwe, O. C. Alfonso, O. O. Abimbola and I. I. M. Nwankwo	125-129
GPBB 28	Varietal Performance of Tissue Culture-derived Root and Tuber crops; Key towards ensuring Food Security	130-133

SOIL CONSERVATION, FERTILITY AND WATER MANAGEMENT

	An overview: Soybean and Biological Nitrogen Fixation I.M. Oludunsin, A. Shaahu, U. Aliyu, A. B. Umaru, B. A. Ocheni, J. O. Okoh, E. A. Ochigbo, G. G. Jibung and G. C. Nnamani	1-5
SCFWM 01		
SCFWM 02	Analytical Quality Control Measures in the Determination of Heavy Metals in Soil: A Review A. A. Koleola, J. O. Jacob and J. Yisa	6-11
SCFWM 03	Assessment of Micronutrient Status under Different Land Use Types in Oyo State College of Agriculture and Technology, Igboora, Nigeria N. O. Olla, W. B. Bello, L. A. Aribisala, S. O. Ogunjinmi, A. S. Alabi, S. K. Omilabu, A. C. Olowofela and M. I. Olaniyan	12-14
SCFWM 04	Comparative Assessment of Soil Fertility and Carbon Content of Oil Palm and Palm Plantation in Isiala Mbano, Imo State, South Eastern Nigeria G. U. Njoku, J. A. L. Effiong, E. U. Eze, C. O. Anah, O. M. Amasiatu, S. C. Uhiara, G. O Ibe	15-17
SCFWM 05	Conservation Agriculture as A Modern Global System of Soil Fertility Restoration and Management D. N. Osujieke, A. Ali, E. A. Igomu, E. C. Nnabuihe, G.U. Njoku	18-21
SCFWM 06	Effects of Municipal Solid Wastes on Soil Properties and Heavy Metal Concentration in Owerri, Southeastern Nigeria M. O. Ugwojanma and G. E. Osuji	22-28
SCFWM 07	Evaluating Hydraulic Properties of Soils: A Management Strategy towards Fighting the 21 st Century Flood Disaster M. S. Adiaha, E. E. Oku, V.O. Chude and B. Ukem	29-32
SCFWM 08	Evaluation of different Fertilizer Recommendation Approaches for Cocoa Seedling Growth in Nigeria under Greenhouse Conditions M. O. Ogunlade, F. E. Asowata and N. Taiwo	33-37
SCFWM 09	Evaluation of Water Quality Index of River Musa, Bida, Nigeria for Drinking purpose Yunusa Abubakar and Ndagi Abdulrahman	38-43
SCFWM 10	Forms and Profile Distribution of Phosphorus along a Toposequence of Amaeke Ibeku Soils, Umuahia, Abia State, Nigeria O. C. Nwosu, J. E. Ohaeri, B. O. Unagwu	44-52
SCFWM 11	Forms and Profile Distribution of Potassium Along a Toposequence in Amaeke Ibeku Soil, Umuahia Abia State	53-61

O. C. Nwosu, J. E. Ohaeri, B. O. Unagwu

SCFWM 12	Geographic Information System (GIS)-Based Digital Mapping of Soil Properties for Arable Agriculture in Ike-Bunu, Kogi State E. O. Robert, B. A. Lawal, and J. A. Odojin	62-67
SCFWM 13	Greenhouse Assessment of N, P and K Content of Maize as Influence by Integrated Soil Management Practices A. A. Yakubu and Omeke J. O.	68-72
SCFWM 14	Nutrient Mapping for Improved Cotton <i>Gossypium Spp</i> yield and Fiber Quality Using Geographic Information System H. Isah, M.S Mohammed, A. Alhassan, H. A. Ahmed, A. Shifau, A. Ibtihaj, Z.T. Jibril, E. Ovosu, M. A. Yahaya and N. Abdurrasheed	73-85
SCFWM 15	Nutrients Evaluation and Management of Soils of NRCRI Nyanya FCT, Experimental Farm for Increased Turmeric Yield I. N. Onyekwere, P. C. Muogbo T. O. Sijuwola and P. C. Eze	86-88
SCFWM 16	Pond Wastewater Treatment and the Possibility for Re-Use F. H. Kolawole, R. O. Ojutiku¹ and A. S. Abdulkareem	89-92
SCFWM 17	Proximate Compositions of <i>Clarias gariepinus</i> from Selected Dams in Niger State H. L. Muhammad, A. M. Orire and S. O. E. Sadiku	93-95
SCFWM 18	Spatio-Temporal Studies of Sea Surface Temperature and its Respond on Precipitation in the Gulf of Guinea A. S. Ayinde	96-101